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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/362,982	07/30/1999	SHINICHI TANIGUCHI	003510-043	7542

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BUCHANAN INGERSOLL PC  
(INCLUDING BURNS, DOANE, SWECKER & MATHIS)  
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EXAMINER
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SHERR, CRISTINA O

ART UNIT	PAPER NUMBER
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3621

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/362,982	Applicant(s) TANIGUCHI ET AL.	
	Examiner Cristina Owen Sherr	Art Unit 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,12 and 14-22 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1,3-7,12 and 14-22 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All b) ☐ Some \* c) ☐ None of:  
 1. ☒ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 12/07/04.  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This communication is in response to applicant's amendment filed April 4, 2005. Claim 1 has been amended. Claims 2, 8-11, 13, and 23-25 have been canceled. Claims 1, 3-7, 12, and 14-22 are pending in this case.

#### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on December 7, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1, 3-7, 12, and 14-22 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-7, 12, and 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoshino et al (US 6,088,680A).

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7. Regarding claim 1 –

Hoshino discloses a vehicle-mounted communication device comprising:

Transmitting/receiving means provided for communication of information with road-side communication means located at a road side, the vehicle-mounted communication device not being provided with encryption means for decoding encryption information the encryption information being passed through the vehicle mounted communication device in an undecoded state; and relay means for relaying the encryption information, received from the road side by said transmitting/receiving means, to an IC card which is connected via an I/O port of the I/C card to the vehicle-mounted communication device, the IC card includes a) storage means for storing user information regarding a balance of charges and b) encryption means that encrypts and outputs output information based on the user information and decodes encrypted input information regarding the user information] wherein said relay means relays the output information encrypted by the IC card to said transmitting/receiving means, wherein an ID of the vehicle is stored in the vehicle-mounted communication device for corresponding the vehicle and the vehicle-mounted communication device. and a certified key code is stored in the IC card for corresponding the vehicle-mounted communication device and the IC card (e.g. col 3 ln 6-60).

8. Although Hoshino does not specify an I/C card, but rather radio communication, it is well-known that both I/C cards and radio are known methods of wireless communication. It would be obvious to obvious to one of ordinary skill in the art to

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substitute and I/C card for radio, just as it is known that music may be broadcast wirelessly over the Internet or over the radio.

9. Regarding claim 3 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, further comprising encryption information storage means in which the encryption information is temporarily stored, wherein said transmitting/receiving means stores the encryption information in said encryption information storage means and transmits as is the encryption information stored in said encryption information storage means (e.g. col 3 ln 6-20).

10. Regarding claim 4 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (e.g. col 3 ln 28-40).

11. Regarding claim 5 –

Hoshino discloses a road-to-vehicle communication device comprising: a vehicle-mounted communication device according to claim 1; and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (e.g. col 3 ln 35-50).

12. Regarding claim 6 –

Hoshino discloses a road-to-vehicle communication device according to claim 5, wherein road-side encryption means of said road-side control means installed at an entrance gate effects encryption of transmitted information and road-side encryption means of said road-side control means installed at a toll reception gate effects only decoding of received information (e.g. col 4 ln 6-12).

13. Regarding claim 7 –

Hoshino discloses a road-to-vehicle communication device according to claim 5, wherein the transmitted information is accounting information regarding accounting processing of charged facilities (e.g. col 4 ln 16-22).

14. Regarding claim 12 –

Hoshino discloses a vehicle-mounted communication device according to claim 3, wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (e.g. col 5 ln 6-18).

15. Regarding claim 14 –

Hoshino discloses a road-to-vehicle communication device comprising: a vehicle-mounted communication device according to claim 3, and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and

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also including road-side encryption means for encrypting transmitted information and decoding received information (e.g. 5 ln 12-25).

16. Regarding claim 15 –

Hoshino discloses a road-to-vehicle communication device comprising: a vehicle-mounted communication device according to claim 4, and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (e.g. col 5 ln 40-48).

17. Regarding claim 16 –

Hoshino discloses a road-to-vehicle communication device according to claim 6, wherein the transmitted information is accounting information regarding accounting processing of charged facilities (e.g. col 6 ln 2-12).

18. Regarding claim 17 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (e.g. col 5 ln 43-55).

19. Regarding claim 18 –

Hoshino discloses a road-to-vehicle communication device comprising: a vehicle-mounted communication device according to claim 17, and road-side control means

being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (e.g. col 4 ln 56-65).

20. Regarding claim 19 –

Hoshino discloses a road-to-vehicle communication device according to claim 18 wherein road-side encryption means of said road-side control means installed at an entrance gate effects encryption of transmitted information and road-side encryption means of said road-side control means installed at a toll reception gate effects only decoding of received information (e.g. col 6 ln 12-19).

21. Regarding claim 20 –

Hoshino discloses a road-to-vehicle communication device according to claim 19, wherein the transmitted information is accounting information regarding accounting processing of charged facilities (e.g. col 5 ln 32-45).

22. Regarding claim 21 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, wherein said relay means relays encryption information in an undecoded state (e.g. col 5 ln 12-25).

23. Regarding claim 23 -

Hoshino discloses a vehicle-mounted communication device according to claim 1, wherein the encryption information is temporarily stored in the vehicle-mounted communication device in an undecoded state (e.g. col 6 ln 19-28).



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24. Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may be applied as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention as well as the context of the passage as taught by the prior art or disclosed by the examiner.

#### Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

26. Hurta et al (US 5,602,919) discloses a speedup for monetary transactions using a transponder in conjunction with a smartcard.

27. Jesadanont (US 5,451,758A) discloses an automatic non-computer network no-stop collection of expressway tolls by magnetic cards and method.

28. Chaum et al (US 5,485,520A) discloses an automatic real-time highway toll collection from moving vehicles.

29. Shigenaga et al (US 5,554,984A) discloses an electronic traffic tariff reception system and vehicle identification apparatus.

30. Maeda et al (US 5,926,546A) discloses a communication device and system for mobile encrypted communication.

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31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

32. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cristina Owen Sherr whose telephone number is 571-272-6711. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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*James S. Cook*  
Primary Examiner